

ABSTRACT

A process of producing a thin film electrolyte is provided wherein a volatile lithium-containing precursor and a volatile phosphate-containing precursor are mixed into a plasma 5 generated from a plasma source. The mixture is then deposited upon a substrate. The process is conducted with the use of a system (11) having a plasma source (13) having a primary plenum (16) and a secondary plenum (23). The primary plenum is in fluid communication with a source of nitrogen gas (47) and a source of hydrogen gas (51). The secondary plenum is in fluid communication with a first bubbler (31) and a second bubbler (38).